NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA
(An Autonomous Institute Affiliated to AKTU, Lucknow)
B.Tech.
SEM: II - CARRY OVER THEORY EXAMINATION - JUNE (2021 - 2022)
Subject: Introduction to Cloud Computing

Time: 3 Hours   Max. Marks: 100

General Instructions:
1. The question paper comprises three sections, A, B, and C. You are expected to answer them as directed.
2. Section A - Question No- 1 is 1 marker & Question No- 2 carries 2 mark each.
3. Section B - Question No-3 is based on external choice carrying 6 marks each.
4. Section C - Questions No. 4-8 are within unit choice questions carrying 10 marks each.
5. No sheet should be left blank. Any written material after a blank sheet will not be evaluated/checked.

SECTION A   20

1. Attempt all parts:-

1-a.   Which of these companies is not a leader in cloud computing? (CO1)   1

              (a) Google

              (b) Microsoft

              (c) Amazon

              (d) Blackboard

1-b.   What is the disadvantage of cloud computing? (CO1)   1

              (a) It requires constant internet connection.

              (b) It does not support group collaboration.

              (c) It provides limited storage.

              (d) None of these

1-c.   What is virtualized in full virtualization? (CO2)   1

              (a) Processor

              (b) Application

              (c) Desktop

              (d) Hardware

1-d.   Which architecture will be built on top of a SOA ? (CO2)   1

              (a) Application Architecture

              (b) Service Architecture

              (c) Component Architecture

              (d) None of the above

1-e.   How many types of services does the Cloud Computing offer to the users? (CO3)   1

              (a) 2

              (b) 4

              (c) 5

              (d) 3

1-f.   Which of the following is the application of cloud computing? (CO3)   1

              (a) Adobe Creative Cloud

              (b) Paypal

              (c) Google G Suite

              (d) All of the mentioned above

1-g.   Which one of the following can be considered as the example of the Front-end? (CO4)   1

(a) Web Browser

(b) Google Compute Engine

(c) Cisco Metapod

(d) AWS

1-h.	Which of the following provides the Graphic User Interface (GUI) for interaction with the cloud? (CO4)	1

(a) Client

(b) Client Infrastructure

(c) Application

(d) Server

1-i.	Which OpenStack component provides database as a service? (CO5)	1

(a) Trove

(b) Kuryr

(c) Storlets

(d) Manila

1-j.	Which of the following allows the users to login into a several different websites with the same single account ? (CO5)	1

(a) OpenID

(b) FIDM

(c) SSO

(d) IDENTITY

2. Attempt all parts:-

2.a.	What do you understand by "on demand provisioning" of resources in cloud computing environment? (CO1)	2
2.b.	What are the different types of virtualization? (CO2)	2
2.c.	What is the role of cloud auditor? (CO3)	2
2.d.	Explain the security standards? (CO4)	2
2.e.	What is Windows Azure? (CO5)	2

<div align="center">SECTION B   30</div>

3. Answer any <u>five</u> of the following:-

3-a.	What is client-server computing? Explain with the help of a diagram. (CO1)	6
3-b.	Discuss the features of EC2 instances. (CO1)	6
3-c.	What are the various advantages of I/O devices virtualization? (CO2)	6
3-d.	Give the brief introduction of REST. How it is useful in cloud computing process? (CO2)	6
3.e.	Point out the benefits of PaaS. (CO3)	6
3.f.	Identify & explain the risks associated with storage of data security. (CO4)	6
3.g.	Discuss the future of federation in terms of cloud computing. (CO5)	6

<div align="center">SECTION C   50</div>

4. Answer any <u>one</u> of the following:-

4-a.	Discuss the evolution of cloud computing. (CO1)	10
4-b.	Differentiate between: (i) Cluster and Grid computing (ii) Cloud Scalability and Elasticity. (CO1)	10

5. Answer any <u>one</u> of the following:-

5-a.	What is a Hypervisor? Explain in detail with necessary illustrations. (CO2)	10
5-b.	Write short notes on: (i) Instruction Set Architecture Level (ISA) Virtualization (ii)	10

Hardware Abstraction Level (HAL) Virtualization (iii) Operating System Level Virtualization. (CO2)

6. Answer any <u>one</u> of the following:-

6-a.	Explain the NIST cloud computing reference architecture with a neat schematic diagram. (CO3)	10
6-b.	What are the various design challenges in IaaS, PaaS, and SaaS models? Compare IaaS, PaaS, and SaaS with examples. (CO3)	10

7. Answer any <u>one</u> of the following:-

7-a.	Discuss third party authentication in IAM. How AWS IAM allows access? (CO4)	10
7-b.	Express the objectives of cloud security governance. (CO4)	10

8. Answer any <u>one</u> of the following:-

8-a.	Analyse the features and limitations of Open Stack in terms of its availability on global cloud resource management platform. (CO5)	10
8-b.	Enlist the services that are provided by Amazon and explain any three. (CO5)	10